1) A method of operating a bridge which receives data read commands from a host via a USB connection and which issues read commands to a storage device, each of said read commands requesting data at a particular address, said method including,

5   generating speculative read requests which request data from addresses that are sequential to the address specified in a previous read request,

comparing the address in subsequent read request to the address in said speculative read request, and

10   transmitting to the host the data retrieved in response to said speculative read request if said addresses are the same.

2) A method of operating a bridge device which receives data read commands from a host via a USB connection and which translates said read commands

15   into commands in ATA format to a storage device, said method including two parts the first of which occur in response to the first read command which requests data at a first location and the second part of which occurs in response to read commands subsequent to said first command, each said subsequent commands requesting data at subsequent locations, said method

20   including the steps of:

a) translating said first read command into an ATA format command and transmitting said ATA read command to said storage device where said storage device retrieves the data at said first location and transmits said data to said bridge device,

b) transmitting said data from said bridge to said host via said USB connection,

c) generating and transmitting to said ATA interface and to said storage device a second read command requesting data at the next sequential

5   location to said first location,

d) receiving and storing the data retrieved from said next sequential location, and

e) when the a subsequent read command is received from said host, comparing the address in said subsequent command to said next sequential

10   location address, and transmitting the data received from said storage device in response said request for data from the next location, if the address in said subsequent read command is the same as said next sequential address.

3) The method recited in claim 1 wherein said USB connection operates in

15   accordance with the USB 2.0 standard protocol.

4) The method recited in claim 2 wherein said USB connection operates in accordance with the USB 2.0 standard protocol.

20   5) The method recited in claim 1 wherein said storage device is a hard disk drive.

6) The method recited in claim 2 wherein said storage device is a hard disk drive.

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7) The method recited in claim 1 wherein said host is a personal computer.

8) The method recited in claim 2 wherein said host is a personal computer.

5   9) A bridge which receives data read commands from a host via a USB connection and which issues read commands to a storage device, each of said read commands requesting data at a particular address, said bridge including,

means for generating speculative read requests which request data

10   from addresses that are sequential to the address specified in a previous read request, and

means for comparing the address in subsequent read request to the address in said speculative read request, and transmitting to said host the data retrieved in response to said speculative read request if said addresses

15   are the same.

10) A bridge device which receives data read commands from a host via a USB connection and which translates said read commands into commands in ATA format to a storage device, said bridge receiving a first read command

20   which requests data at a first location and a subsequent commands requesting data at subsequent locations, said bridge including:

a) means for translating said first read command into an ATA format command and transmitting said ATA read command to said storage device where said storage device retrieves the data at said first location and

25   transmits said data to said bridge device,

b) means for transmitting said data from said bridge to said host via said USB connection,

c) means for generating and transmitting to said ATA interface and to said storage device a second read command requesting data at the next

5   sequential location to said first location,

d) means for receiving and storing the data retrieved from said next sequential location, and

e) means operable when the a subsequent read command is received from said host, for comparing the address in said subsequent command to

10   said next sequential location address, and for transmitting the data received from said storage device in response said request for data from the next location, if the address in said subsequent read command is the same as said next sequential address.

15   11) The bridge recited in claim 9 wherein said USB connection operates in accordance with the USB 2.0 standard protocol.

12) The bridge recited in claim 10 wherein said USB connection operates in accordance with the USB 2.0 standard protocol.

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13) The bridge recited in claim 9 wherein said storage device is a hard disk drive.

14) The bridge recited in claim 10 wherein said storage device is a hard disk

25   drive.

15) The bridge recited in claim 9 wherein said host is a personal computer.

16) The bridge recited in claim 10 wherein said host is a personal computer.

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17) A method of operating a bridge which connects a memory device to a host via a USB connection, said host being adapted to send a sequence of memory read commands to said bridge, said method including the following steps performed after data from a first read command is received from said

10   memory device,

a) generating a speculative read command to read data from the next sequential address to the address specified in the previous read command from the host,

c) after a read command is received by said bridge from said host,

15   comparing the address in said read command to said next sequential address used by the previous speculative read command, and

d) if said addresses match, sending the data received by said speculative read command to said host.

20   18) The method recited in claim 17 wherein the data read by said speculative read command is discarded in the address in the next read command from the host does not match the address in said speculative read command.

19) The method recited in claim 17 wherein said USB connection operates in

25   accordance with the USB 2.0 standard protocol.

20) The method recited in claim 17 wherein said storage device is a hard disk drive.

5   21) The method recited in claim 17 wherein said host is a personal computer.

22) The bridge recited in claim 9 wherein said storage device includes an address register and wherein said speculative read request pre-loads said address register and instructs said storage device to read data specified by

10   the address register if the address loaded equals the address in said subsequent read command.

23. The bridge recited in claim 22 wherein said storage device includes a length register and said speculative read request also pre-loads said length

15   register.